

hundredths more than in December, 1872 and 1890. Owing to the difficulty of measuring snowfall with the requisite accuracy, we may, in general, say that the Decembers of 1872, 1881, 1890, 1896, and 1898 must have been very much alike as regards the dearth of snow.

WYOMING.

Mr. W. S. Palmer finds that, as in most other States, Wyoming has had lower temperatures than the average, but not a remarkably low precipitation. If we arrange the data given by him, according to temperatures, we have the following December values:

Year.	Temperature.	Precipitation.
	°	Inch.
1896	32	0.10
1893	28	0.90
1891	26	0.82
1894	24	0.57
1895	23	0.45
1892	21	0.99
1897	20	0.91
1898	17	0.64
Average.	27.5 20.2	0.60 0.75

This table shows a slight tendency toward an increase of precipitation in proportion as the temperature is lower. The small rate 0.02 for each degree of temperature is, however, affected by a large range of uncertainty, but we are probably justified in considering Wyoming as belonging to the eastern boundary of the region that extends eastward from the Pacific coast and over which low temperatures and increased rainfalls go together. To the east of this boundary we undoubtedly come upon the lower plains where in the winter season low temperatures and diminished precipitation naturally go together.

ASTRONOMY FOR THE METEOROLOGIST.

Under date of December 19, Mr. George Ling, observer, Weather Bureau, at Havre, Mont., writes:

An observer astronomically inclined is compensated for his early rising at this season by the sublime spectacle afforded by the heavens.

The brilliancy of the planet Venus is supreme and presents a grand sight. This morning at 8:10 a. m. (seventy-fifth meridian time) Venus appeared in the southeast unusually large and bright, the reflection of her light from some ks. clouds passing by resembled that of the moon coming from behind a cloud, and soon afterwards a faint corona showed around the planet. I could see Venus after the sun was up, and it was easily seen by the naked eye when the sun was three degrees high.

Farther in the west was Jupiter, in Virgo, shining conspicuously, and still farther west was Mars, in Cancer, looming up bright and red. Each planet shone very large and bright in comparison with the stars. Orion was setting in the west, and his first-magnitude star, Betelgeuze, stood out prominent in the western sky. Castor, of the Twins; Cancer, with its Beehive, and now decorated by Mars; Regulus, in the Sickle; the triangle formed by Arcturus, Denebola, and Spica; Capella and the Kids; the Dipper, with its "pointers" showing the way to the north Polar Star, all added to the splendor of the scene. Here and there a shooting star flashed in sight, but soon all was obliterated as the circle of illumination rose higher and higher.

Mr. Ling's beautiful description of the starry skies encourages us to hope that he will prepare for the careful observation of the meteoric showers, that interest both astronomers and meteorologists; and why may not others do so, also?

ELECTRICAL DISTRICTS.

Referring to the MONTHLY WEATHER REVIEW for August, 1897, page 352, the Editor has been informed that the town of Sparta, White County, Tennessee, is especially subject to

thunderstorms and injurious lightning, which is popularly supposed to be the result of peculiarities in its location. It is situated on the east side of a small stream and on a bluff or hill, considerably higher than the land on the western side of the stream. It is said that the strong winds bringing thunderstorms from the west strike the city on the bluff with great force, that the thunderstorms themselves are much more severe than over the lowlands opposite, and that the danger from injurious lightning is much greater.

No statistics are at hand to confirm this popular belief, but if any exist we should be glad to publish them. On general principles, however, the Editor inclines to the opinion that the popular belief may very likely prove to have but little foundation in fact. Doubtless there are facts that argue both for and against it.

ORIGIN OF THE WORD "BLIZZARD."

According to an article in the Weekly Record, published at Sturgis, South Dakota, January 6, 1899, the word "blizzard" was in use at least as early as 1867. In that year the Hutchinson County Herald gives an account of the blizzard that suddenly approached the town of Vermilion, calling it by that name as one in common use when applied to a sudden change from warm and balmy weather to a blinding snow with cold northwest winds.

The old settlers of South Dakota take exception to the statement that the word "blizzard" originated with a Chicago newspaper, The Advance, on the 8th of January, 1880.

SEISMIC NOISES.

In a letter received long since from Mr. John H. Eadie of Bayonne, N. J., he offered an ingenious explanation as to the origin of the seismic noises frequently heard without any appreciable earthquake shock, viz, that their origin is similar to that of the noises heard in steam-heating apparatus. As is well known, these are caused by the concussion between two masses of water coming together with considerable speed in a space that is almost entirely vacuous. The steam that should fill the pipes is easily condensed if the pipes are cold and the fall of even a drop of water through a vacuous space of ten or fifteen feet, or the rush of water from opposite directions into a space in which steam has just been condensed produces loud noises that would not be made if there were enough air in the pipe to act as a buffer. But it does not seem likely that this explanation could apply to the action of steam in the internal crevices and caves of the interior of the earth, as is suggested by Mr. Eadie, because the surfaces of these cavities can hardly be cold enough to condense the aqueous vapor to the extent necessary to cause the observed phenomena. Neither would the sudden release of gas under pressure escaping into a subterranean passage act like a water hammer unless the passage were appreciably free from air, and this seems rather unlikely.

On the whole we are inclined to adhere to our general conclusions that these subterranean noises originate in the breaking, crunching, and sliding of layers of rock and earth under great pressure.

MIROBIA AND SEICHES.

Mr. F. Napier Denison has made a special study of the minute undulations recorded upon the self-registering tide gauges, and has compared them with the curves of the self-registering barographs for a number of points on the Atlantic coast of Canada and within the Gulf of St. Lawrence and the smaller bays. He finds that these minute undula-